

presence may be attributed by the human host to (1) "imagination," as the doctors would have us believe; (2) "summer heat," since the mites are most active during hot weather; or perhaps (3) "dandruff." A wide-open field exists for anyone enterprising enough to do some real investigation on this subject.

The presence of the mite *Bdellonyssus sylviarum* as a causative agent of dermatitis in the human scalp and on the human body is likewise reported. At last reports, the unfortunate host of this mite was still suffering from its depredations. In this case, the diagnosis had been: "Just a phobia." Here is another field in which to date there has been no competition in the matter of studying the mite as an occasional human parasite.

THE GENUS PROBEZZIA IN NORTH AMERICA

(DIPTERA, HELEIDAE)

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The purpose of this paper is to call attention to the proper application of the generic name *Probezzia* Kieffer, to present descriptions of four new species from the United States, to include notes and distribution records for the seven previously known species and to offer a key for their separation.

Most of the material studied is from the U. S. National Museum collection (abbreviated USNM in the distribution lists). Short series were also examined from the California Academy of Sciences (CAS) through the courtesy of E. S. Ross and E. L. Kessel, from Curtis W. Sabrosky's collection of Michigan and Kansas Diptera, and from the writer's personal collection from Louisiana and California.

Genus *Probezzia* Kieffer

Probezzia Kieffer, 1906, Gen. Insectorum, fasc. 42:57; Coquillett, 1910, Proc. U. S. Nat. Mus., 37:594; Malloch (part), 1914, Proc. Biol. Soc. Wash. 27:137; Malloch (part), 1915, Bull. Ill. St. Lab. Nat. Hist. 10:352. (Genotype: *Ceratopogon venustus* Meigen, desig. Coquillett, 1910).

Dicrobezzia Kieffer, 1919, Ann. Mus. Nat. Hungarici 17:127; Ingram & Macfie, 1921, Ann. Trop. Med. and Parasitol. 15:371; Edwards, 1926, Trans. Ent. Soc. London. 74:414; Johanssen, 1943, Ann. Ent. Soc. Amer. 36:785; Lane, 1947, Arq. Fac. Hig. S. Pub. U. São Paulo 1:232. (Genotype: *Ceratopogon venustus* Meigen, orig. desig.). New synonymy.

Diagnosis: Body slender and nearly bare. Eyes bare and usually well separated; antennae with flagellar segments elongate, verticils short and sparse, in male with plumes scanty; palpi slender. Mesonotum without anterior spine or tubercle; dorsum with short scattered erect bristles.

Femora slender and unarmed; fourth tarsal segment bilobed; fifth tarsal segment of female with blunt strong spines or batonnets below, the claws large and bifid. Wing with vein R_2 absent, thus with a single long radial cell, in female reaching nearly to wing tip; median fork broadly sessile. Female abdomen without eversible glands or internal sclerotized rods; eighth sternite with a pair of prominent submedian tufts of long fine hairs on posterior margin. Male genitalia with ninth sternite very short and deeply emarginate; ninth tergite long, slender, and tapered distad, with large dorso-lateral lobes; basistyles long and slender; dististyles short and pointed, aedeagus tapered, with short anterior arch and caplike posterior point; parameres slender, parallel sided, and fused more or less in middle.

Through some oversight or other circumstances, *Probezzia* has until now been recognized as distinct from *Dicrobezzia* and usually closely related to, or a subgenus of, *Bezzia* Kieffer. However, since the same species, *venustus* Meigen, is the genotype of both *Probezzia* and *Dicrobezzia*, the earlier name *Probezzia* must prevail for the group with the characters of *venustus*. This change, though unfortunate, is unavoidable if the rules of nomenclature are to be followed. The designation, with a question, of *Ceratopogon albiventris* Loew as the genotype of *Probezzia* by Macfie (1940), even if it were not invalid, would not alter this synonymy, since this American species is also a typical *Dicrobezzia* in the old sense. I prefer not to recognize a separate category for the species of *Bezzia* with unarmed femora which Macfie (*loc. cit.*), Johannsen (1943), and other authors erroneously call *Probezzia*, agreeing with Edwards (1926) that this criterion alone is an artificial one for splitting the genus *Bezzia*. Therefore, it is not necessary, in my opinion, to find a new name for the *Probezzia* of these authors.

As pointed out by Edwards (*loc. cit.*), *Probezzia* bears the same relationship to *Bezzia* that *Johannsenomyia* does to *Palpomyia*, with slender unarmed femora, fifth tarsal segment of female with ventral batonnets, and female abdomen without internal sclerotized rods.

The following key and descriptions refer primarily to female specimens, which are far more common in collections than the males. Males are much more difficult to separate, only slight differences being found in the genitalia of those species that have been examined. As a rule the males are much smaller, about half the size of the females, and the extent of dark markings is greater. The males lack the great prolongation of the radial cell to the wing tip, but several of the ventral batonnets are usually present on the ventral side of the dark-colored fifth tarsal segment, serving to distinguish them from males of *Bezzia*.

KEY TO THE NEARCTIC SPECIES OF PROBEZZIA

1. Knob of halteres black, stem yellow..... 2
 Knob of halteres yellow or white..... 5
2. Femora black, sometimes narrowly yellow at base 3
 Femora yellow except distal third black; abdomen yellow with
 segments 4, 5, and 6 black; wing with broad dark band from
 r-m crossvein to apex..... *infuscata* Malloch
3. Abdomen white except segments 8 and 9 dark; base of femora
 often yellowish; basal flagellar segments white; small, length
 less than 3 mm.; wing white *albiventris* (Loew)
 Abdomen all dark or with broad dark preapical band 4
4. Abdomen white with tergites 4, 5, 8, and 9 dark; legs dark, only
 trochanters yellowish; basal flagellar segments whitish; an-
 terior wing veins yellowish *ludoviciana* Wirth
 Abdomen all dark; legs with trochanters dark; basal flagellar
 segments brownish annulated; wings milky white *atriventris* Wirth
5. Thorax entirely yellowish; legs yellow to pale brownish
 *pallida* Malloch
 Thorax shining black, at least on posterior half; legs with dark
 brown bands 6
6. Mesonotum yellow on anterior half; wings hairy on distal half
 *unica* (Johannsen)
 Mesonotum entirely shining black; wings bare 7
7. Legs dark except trochanters, extreme base of femora and tarsi
 yellowish; wings infuscated more or less deeply, all veins dark
 brownish *smithii* (Coquillett)
 Legs with at least basal third of femora white; wings with less
 than a fourth of the anterior margin lightly infuscated 8
8. Abdomen white; wings whitish, the veins colorless; legs yellowish
 white, apical third of all femora black 9
 Abdomen white, intermediate three segments infuscated; wings
 whitish, more or less infuscated in an anterior median patch
 centering on r-m crossvein about a fourth of wing length, the
 veins brownish in that area; legs with apical third of mid and
 hind, and all except base or only a narrow apical band on
 fore femur black..... 10
9. Base of hind tibia yellow *xanthogaster* (Kieffer)
 Base of hind tibia with dark band *sabroskyi* Wirth
10. All except extreme base of fore femur black; basal two-thirds of
 hind tibia black, as well as narrowly at apex; fore and mid
 tibiae darkened on basal fourth; wing veins black adjacent to
 crossvein, the membrane in this area infuscated; length
 about 2 mm. *rosewalli* Wirth
 Fore leg with only knee narrowly dark; hind tibia with narrow
 yellow band at base, then broadly black to mid-length, as
 well as narrowly at apex; wing veins very slightly infuscated
 near crossvein, the membrane clear; length about 3 mm.
 *flavonigra* (Coquillett)

***Probezzia infuscata* Malloch**

Probezzia infuscata Malloch, 1915, Bull. Ill. St. Lab. Nat. Hist. 10:316;
Johannsen, 1943, Ann. Ent. Soc. Amer. 36:785.

Length 3.5 mm. A large black and yellow species; thorax shining black; wings whitish hyaline on basal third, smoky brown with brown veins from r-m crossvein to apex; halteres with black knob; antennae yellow, last five segments dark; legs yellow, coxae, distal third of femora, all of tibiae and fifth tarsal segment brownish black; abdomen yellow with segments 4, 5, and 6 black.

Recorded Distribution: Malloch (1915) type locality, White Heath, Ill., type female in Illinois Natural History Survey, Urbana.

Material examined: MICHIGAN: E. Lansing, June 18, 27, 1936 (Sabrosky) 2 ♀♀.

ONTARIO: Fort Erie, July 4, 1910 (Van Duzee) (CAS) 12 ♀♀.
Ridgeway, June 22, 1919 (Van Duzee) (CAS) 1 ♀.

***Probezzia albiventris* (Loew)**

Ceratopogon albiventris Loew, 1861, Berlin. Ent. Ztschr. 5:311. (Cent. I. No. 7).

Bezzia albiventris, Kieffer, 1906, Gen. Insectorum, fasc. 42:58.

Probezzia albiventris, Johannsen 1908, N. Y. State Mus. Bul. 124:267;
Malloch, 1914, Proc. Biol. Soc. Wash., 27:318; 1915, Bull. Ill. St. Lab. Nat. Hist. 10:356; Johannsen, 1943, Ann. Ent. Soc. Amer. 36:785.

Bezzia (Probezzia) albiventris, Kieffer, 1917, Ann. Mus. Nat. Hungarici 15:329.

♀. Length 3.0 mm. A large black and yellow species; thorax shining black; wings whitish hyaline, including veins; halteres with black knob; antennae whitish, last five segments dark; legs yellow, coxae, femora except at extreme base, tibiae, and last two tarsal segments brownish black; abdomen yellowish, segments 8 and 9 brown.

Recorded Distribution: Loew (1861) type locality, Georgia, type female, presumably at the Museum of Comparative Zoology, Cambridge, Mass.; Malloch (1915) New Jersey, Illinois.

Material examined: LOUISIANA: Baton Rouge, Amite River, May 16, 1947 (Wirth) 1 ♀.

OKLAHOMA: Roff, July 15, 1937 (Standish-Kaiser) (USNM) 2 ♀♀.
Ardmore, June 8, 1939 (Kaiser-Nailon) (USNM) 1 ♀.

MICHIGAN: Traverse City, July 9, 1941 (Sabrosky) 1 ♀.

***Probezzia ludoviciana*, new species**

A large shining black and yellow species with thorax, femora, and tibiae, knobs of halteres and abdominal segments 4, 5, 8, and 9 black; wings white, the veins yellowish.

♀. Length 2.8 mm., wing 2.6 mm. by 0.8 mm. Head dark brown, vertex and clypeus with scattered long brown hairs; antennae brown, segments 3-10 extensively whitish at base; palpi brown. Thorax shining

black; mesonotum and scutellum with scattered strong black setae. Coxae brown, trochanters yellowish; femora except extreme bases and all of tibiae black, first three tarsal segments whitish, last two black; fifth segment stout, armed beneath with about eight long black spines, claws about half as long as segment, strong with stout outer basal tooth; proportions of segments of hind leg 22:10:100:75:45:20:7:5:15. Wings uniformly whitish hyaline, veins yellowish; costa to wing tip; halteres with knob black, stem brown. Abdomen yellowish, segments four, five, eight and nine black; eight sternite with a pair of prominent submedian dense tufts of long fine yellowish hairs on posterior margin.

Holotype female, Baton Rouge, La., May 6, 1947, W. Wirth (Type No. 59900, U.S.N.M.).

Allied to *albiventris* (Lw.), *infusata* Mall. and *atriventris* n. sp. in the dark halteres, but readily distinguished by the banded abdomen, black femora and tibiae, and yellow trochanters.

***Probezzia xanthogaster* (Kieffer), new combination**

Ceratopogon elegans Coquillett (not Winnertz), 1901, Proc. U. S. Nat. Mus. 23:559.

Bezzia elegans, Kieffer, 1906, Gen. Insectorum, fasc. 42: 58.

Probezzia elegans, Johannsen, 1908, N. Y. St. Mus. Bul. 124: 267; Malloch, 1914, Proc. Biol. Soc. Wash., 27: 138; 1915, Bull. Ill. St. Lab. Nat. Hist. 10:356.

Bezzia (Probezzia) xanthogaster Kieffer, 1917, Ann. Mus. Nat. Hungarici 15: 329 (n. nom. for *Ceratopogon elegans* Coq. not Winn.).

Dicrobezzia xanthogaster, Johannsen, 1943, Ann. Ent. Soc. Amer. 36: 785.

Length 2.5 mm. A rather small black and yellow species; thorax shining black; wings milky white including veins; halteres white; antennae yellow, last five segments black; legs yellow, coxae, distal third of all femora and fifth tarsal segment brownish black, abdomen yellowish.

Recorded Distribution: Coquillett (1901) type locality, Riverton, N. J., type female in U.S.N.M.; Malloch (1915), Illinois, Maryland.

Material examined: NEW YORK: Portage, July 1, 1917 (Van Duzee) (CAS) 1 ♀. Kearney, July 3, 1909 (Van Duzee) (CAS) 1 ♀.

D. C.: Washington, May 28 (Barber) (USNM) 8 ♀ ♀.

MARYLAND: Plummer's Island, May 14, June 11, 1914 (Shannon) (USNM) 2 ♀ ♀.

MICHIGAN: E. Lansing, May 26, 1936, and May 27, 1941 (Sabrosky) 2 ♀ ♀. Ann Arbor, June 12, 1936 (Steyskal) 1 ♀. Marble Lake, Quiney, May 31, 1942 (Sabrosky) 1 ♀.

***Probezzia smithii* (Coquillett)**

Ceratopogon smithii Coquillett, 1901, Proc. U. S. Nat. Mus. 23:600.

Bezzia smithii, Kieffer, 1906, Gen. Insectorum, fasc. 42:58.

Probezzia smithii, Malloch, 1914, Proc. Biol. Soc. Wash. 27:138; 1915, Bull. Ill. St. Lab. Nat. Hist. 10:357.

Bezzia (Probezzia) smithii, Kieffer, 1917, Ann. Mus. Nat. Hungarici 15:329.

Dicrobezzia smithi, Johannsen, 1943, Ann. Ent. Soc. Amer. 36:785.

Length 2.6 mm. A rather small black species; thorax and abdomen black; wings uniformly brownish hyaline, the veins brown; halteres white; antennae whitish, last five segments brown; legs black, except trochanters, extreme base of femora and first four tarsal segments yellowish.

Recorded Distribution: Coquillett (1901) type locality, Riverton, N. J., type female in U.S.N.M.; Malloch (1915, Illinois; Johannsen (1943) northeastern United States.

Material examined: D. C.: Washington, Sept. 7, 1907 (McAtee) (USNM) 1 ♀.

MAINE: Belfast, Sept. 18-22, 1948 (Sabrosky) 1 ♀.

LOUISIANA: Kilbourne, May 10, 1947 (Wirth) 5 ♂♂, 12 ♀♀.

Probezzia unica (Johannsen), new combination

Lasiobezzia unica Johannsen, 1934, Jour. N. Y. Ent. Soc. 42:345; 1943, Ann. Ent. Soc. Amer. 36:784.

♀. Length 2.2 mm. A small black and yellow species; thorax shining dark brown, anterior half of mesonotum and above wing bases yellowish; abdomen yellow, intermediate segments darkened; antennae yellow, last five segments dusky; palpi yellow; legs yellow, apical half of all femora, a broad median ring and apex of hind tibia brown, fifth tarsal segment brown; wing hyaline, the veins pale, apical half of wing with sparse macrotrichiae; halteres pale (revised from original description).

Recorded Distribution: Johannsen (1934), type locality, Ithaca, N. Y., type female in Johannsen collection, Cornell University, Ithaca.

Although Johannsen referred this species to *Lasiobezzia* in 1934 and again in 1943 on the strength of the hairy wings, he pointed out that it differed from the genotype of that genus in several important features, including the lack of femoral spines, prolongation of the radial cell, armed fifth tarsal segment and the claws with a basal tooth, all of which strongly suggest that it is a *Probezzia*. The yellow markings on the mesonotum suggest affinities with *pallida* Malloch, while the leg and wing markings are similar to those of *sabroskyi* n. sp.

Probezzia pallida Malloch

Probezzia pallida Malloch, 1914, Proc. Biol. Soc. Wash. 27:138; 1915, Bull. Ill. St. Lab. Nat. Hist. 10:354; 1915, idem., 11:318; Muttkowski, 1918, Trans. Wis. Acad. Arts and Letters 19:408; Johannsen, 1943, Ann. Ent. Soc. Amer. 36:785.

Length 2.8 mm. A medium-sized, uniformly yellowish-white species; head brown, antennae yellow with last five segments brownish; fifth tarsal segment black.

Recorded Distribution: Malloch (1914) type locality, Muncie, Ill., type female in Illinois Natural History Survey, Urbana; Johannsen (1943), Eastern United States.

Material examined: MARYLAND: Plummer's Island, June 11, 1921 (Barber) (USNM) 1 ♀.

NEW YORK: Lancaster, June 28, 1914 (Van Duzee) (CAS) 1 ♀.

***Probezzia atriventris*, new species**

A large shining black species with white tarsi and wings; antennae brown.

♀. Length 3.2 mm., wing 3.2 mm. by 1.1 mm. Head dull brownish black; vertex and clypeus with scattered long brown hairs; antennae brownish black, bases of segments 3-10 light brown; palpi light brown, slender. Thorax shining black. Legs black; trochanters brownish, first three tarsal segments whitish; fifth segment slender, with about eight long batonnets, claws about two-thirds as long as segment, with strong outer tooth at base; proportions of segments of hind legs 30:10:110:95:55:22:10:5:15. Wings milky white, including veins; halteres with knob black, stem brown. Abdomen entirely dull black, in type with grayish pruinosity.

Holotype female, Traverse City, Mich., July 12, 1939, C. W. Sabrosky (Type no. 59901, U.S.N.M.). Paratype 1 ♀, same locality as type, July 9, 1941 (to be returned to Kans. Univ. Coll.); 1 ♀, Cheboygan Co., Mich., July 4, 1940, R. I. Sailer.

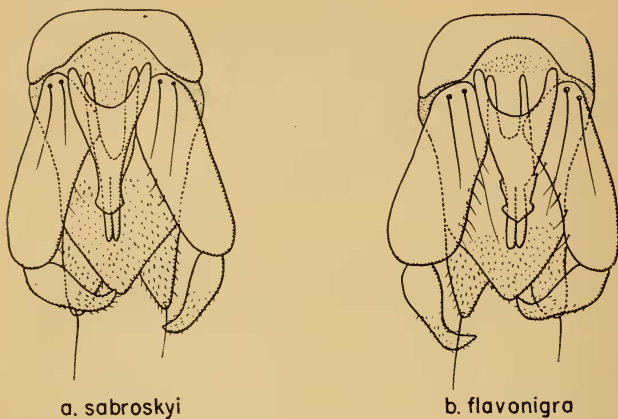
The dark halteres ally this species with *albiventris* (Lw.), *infusata* Mall. and *ludoviciana* n. sp., but the uniform black body and legs and milky-white wings are distinctive.

***Probezzia sabroskyi*, new species**

A medium-sized black and yellow species; halteres white; apical third of all femora black, and hind tibia with broad sub-basal black band.

♀. Length 2.8 mm., wing 2.7 mm. by 0.9 mm. Head dark brown; vertex and clypeus with scattered brown hairs; antennae brown, segments 3-10 whitish; palpi brown. Thorax shining black; legs yellowish, coxae brown; distal third of all femora, a sub-basal band a third the length of hind tibia and ends of hind tibia narrowly black; tarsi white, fifth segment black, with about eight long batonnets, claws about two-thirds as long as segment with long outer tooth at base. Wings milky white including veins; halteres white. Abdomen yellowish white, with sparse long white hairs.

Male genitalia (fig. 1, a); Ninth sternite deeply excavated, the posterior membrane spiculate; ninth tergite long, apex triangularly pointed and ventrally setose, with a pair of large triangular setose dorso-lateral lobes. Basistyles narrow, each with a pair of long hairs at



TEXT FIGURE 1. *Probezzia* species, male genitalia. a, *sabroskyi*, n. sp.; b, *flavonigra* (Coquillett).

base; dististyles about half as long, apex slightly curved and pointed. Aedeagus about twice as long as broad at base, anterior arch not quite a third of total length, apex slender with caplike enlargement. Parameres H shaped, the basal arms well separated, about half as long as the rodlike contiguous posterior arms.

Holotype female, Kinderhook, Branch Co., Mich., May 30, 1942, C. W. Sabrosky (Type no. 59902, U.S.N.M.). Allotype, E. Lansing, Mich., May 25, 1947, C. W. Sabrosky. Paratypes: MICHIGAN: 1 ♀, E. Lansing, May 17, 1936, C. W. Sabrosky; 1 ♀, Marble Lake, Quincy, May 31, 1942, C. W. Sabrosky; 1 ♀., Detroit, May 20, 1938, G. Steyskal; 1 ♀., Chebogan Co., July 4, 1940, R. I. Sailer (to be returned to Kans. Univ. Coll.); 1 ♀., Isle Royale, Aug. 3-7, 1936, C. W. Sabrosky.

This species is closely allied to *xanthogaster* Kieffer, from which it can be distinguished by the board sub-basal dark band on the hind tibia.

***Probezzia rosewalli*, new species**

A small black and yellow species with the fore femora mostly black, mid and hind femora with distal half dark, hind tibia with broad basal dark band, halteres yellow, wings with broad median infuscated band; abdominal segments 3-5 dark.

♂ ♀. Length 2.1 mm., wing 1.9 mm. by 0.7 mm. Head dark brown, vertex and clypeus with scattered brown hairs; antennae with second segment brown, flagellum whitish, last five segments somewhat darker; palpi yellow. Thorax shining black; legs yellow, coxae brown, femora black distad, all but base on fore leg, distal half of mid-leg and distal third on hind leg; fore and mid tibiae with basal fourth brown, hind tibia with basal two-thirds brown, all tibiae with apices narrowly brown; tarsi white, fifth segment black, with about eight very long batonnets, the claws very slender and nearly as long as segment. Wings milky white, a broad smoky brownish band across middle fourth or third at level of r-m cross-vein, the veins brownish on the band; halteres white. Abdomen yellowish white, segments three to five brownish black.

Holotype female, Baton Rouge, La., May 6, 1947, W. W. Wirth (Type no. 59903, U.S.N.M.). Allotype, same, May 16, 1947 (Amite River). Paratypes: LOUISIANA: 4 ♀ ♀, same data as holotype; 1 ♂, 6 ♀ ♀., Kilbourne, May 10, 1947, W. Wirth. Other material: MASSACHUSETTS: 1 ♀, Wilmington, July 4, 1910, H. S. Barber (USNM). NEW YORK: 1 ♀, Indian Lake, Sabael, Aug. 25, 1938, H. G. Barber (USNM). MARYLAND: 1 ♀, Plummer's Island, July 11, 1922, H. S. Barber (USNM), 1 ♀, same, Aug. 18, 1912, J. R. Malloch. VIRGINIA: 1 ♀, Dead Run, Fairfax County, June 22, 1915, R. C. Shannon (USNM).

Very similar to *flavonigra* (Coq.), *xanthogaster* K., and *sabroskyi* n. sp., in the white halteres and black- and yellow-banded legs, but separated from the first by the basal dark markings on the fore tibia, and from the other two by dark abdominal and wing markings. I take great pleasure in naming this species in honor of my former graduate professor, Dr. O. W. Rosewall, of Louisiana State University, the dean of Louisiana entomology.

***Probezzia flavonigra* (Coquillett)**

Ceratopogon flavoniger Coquillett, 1905, Jour. N. Y. Ent. Soc. 13:60.

Bezzia flavonigra, Kieffer, 1906, Gen. Insectorum, fasc. 42:58.

Probezzia flavonigra, Johannsen, 1908, N. Y. St. Mus. Bul. 124: 267;

Malloch, 1914, Proc. Biol. Soc. Wash. 27:138; 1915, Bul. Ill. St.

Lab. Nat. Hist. 10:358; Johannsen, 1943, Ann. Ent. Soc. Amer.

36:785.

Bezzia (Probezzia) flavonigra, Kieffer, 1917, Mus. Nat. Hungarici Ann.

15:329.

♀. Length 2.4 mm. A shining black and yellow species with thorax, five distal antennal segments, and abdominal tergites three to five, black; fore femur narrowly black at tip, mid-femur with distal fourth and hind femur with distal third black; tibiae with narrow apical black band, hind tibiae with sub-basal third black; fifth tarsal segment black, the claws nearly as long as segment; wings milky white on basal third, slightly infuscated on distal portion; halteres white.

♂. Genitalia (fig. 1b): Ninth sternite deeply excavated, the posterior membrane with spiculate band; ninth tergite long and narrow, with slight preapical constriction, apex triangularly tapered and setose ventrally, with a pair of large triangular setose dorso-lateral lobes. Basistyles narrow, with a pair of long hairs at base on each side of aedeagus; dististyles about half as long as basistyles, with hook-like curved apex. Aedeagus about half as long as broad at base, anterior arch to a third of total length, gradually tapered to a trilobed apex. Parameres very slender, fused on middle third, with slender sub-parallel well separated anterior arms, and slender rodlike contiguous posterior arms exceeding tip of aedeagus by about half their length.

Recorded Distribution: Coquillett (1905) type locality, Bear Lake, B. C., type male in USNM.

Material examined: BRITISH COLUMBIA: Bear Lake, June 20, 1903 (Currie) (USNM) 1 ♂ type.

MONTANA: Big Timber, July 14, 1917 (Dyar) (USNM) 4 ♀♀.

NEVADA: Reno, July 21, 1915 (Dyar) (USNM) 1 ♀.

CALIFORNIA: Alturas, July 13-16, 1948 (Wirth) (at light) 32 ♀♀. Alturas, July, Aug., 1948 (Coleman) 20 ♀♀. Topaz Lake, Aug. 1, 1948 (Coleman) 1 ♀. Yuba City, May 29, 1937 (Christenson) (USNM) 1 ♀. Gridley, June 5, 1937 (Christenson) (USNM) 1♀.

Malloch (1915) suggested that the type of this species might be the male of *xanthogaster* (= *elegans*), but with the examination of females, it is evident that *flavonigra* is a distinct western species.

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